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EXAMINER

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ART UNIT

PAPER NUMBER

b

2604

DATE MAILED:

01/28/97

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- Responsive to communication(s) filed on _____
- This action is FINAL.
- Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- Claim(s) 1 - 16 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- Claim(s) _____ is/are allowed.
- Claim(s) 1 - 16 is/are rejected.
- Claim(s) _____ is/are objected to.
- Claims _____ are subject to restriction or election requirement.

Application Papers

- See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- The drawing(s) filed on _____ is/are objected to by the Examiner.
- The proposed drawing correction, filed on _____ is approved disapproved.
- The specification is objected to by the Examiner.
- The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- All Some* None of the CERTIFIED copies of the priority documents have been received.
- received in Application No. (Series Code/Serial Number) _____.
- received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- Notice of Reference Cited, PTO-892
- Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- Interview Summary, PTO-413
- Notice of Draftsperson's Patent Drawing Review, PTO-948
- Notice of Informal Patent Application, PTO-152

- SEE OFFICE ACTION ON THE FOLLOWING PAGES -

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1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. Claims 1&3 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1&3 recite the limitation "...said exposure storage means..." in line 16 of claim 1, and line 11 of claim 3. There is insufficient basis for this limitation in the claims.

3. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

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Claims 1-5&7,8 are rejected under 35 U.S.C. § 103 as being unpatentable over Shimuzu et al(US 5,473,374) in view of Iwasaki(US 5,461,452).

Regarding claim 1, Shimuzu '374 discloses in Fig.2 an exposing apparatus for performing exposure control comprising:

a) the claimed exposure detection means for detecting a signal which is met by the detecting circuit 7 which detects the digital signal supplied by the A/D converter 5(col.4. lines 44, lines 48-49);

b) the claimed exposure control means for controlling exposure is met by the control amount operating circuit which obtains a numerical aperture of the iris 2 according to the image pickup signal level, an electronic shutter speed of the CCD image pickup device 3, and a gain amount of the AGC amplifier 4(col.4, lines 54-66);

c) the claimed exposure maintaining means for maintaining a value relating to exposure is met by the reference level signal setting circuit 9 which supplies a predetermined exposure reference signal to the multiplying circuit 17 which then modulates this reference level signal in accordance with the reference level modulating coefficient K to produce a reference modulating signal R.

However, Shimuzu '374 does not disclose the claimed zone selecting means for selecting any zone from the signal.

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Iwasaki in Fig.28&30 shows a visual axis detecting device 110(column 18, lines 55-67) which detects the visual axis of the photographer, and a tracking device 155(column 18, lines 64-67 & column 19., line 1 - column 21, line 6) which tracks a position which is near the position of object obtained by the visual axis detecting device 110, and has approximate spectral characteristics. By adding the zone selecting means feature to the camera, the photographer is better able to produce a better quality picture because of improved exposure.

Therefore, it would have obvious to one of ordinary skill in the art at the time the invention was made to modify the camera of Shimuzu, as taught by Iwasaki, to include a zone selecting feature to improve the exposure control capability of the camera, thereby creating a better quality camera.

Regarding claim 2, Shimuzu '374, as modified by Iwasaki, teaches in Fig.2&3 an exposing apparatus for performing exposure control comprising the claimed limitation that if the value relating to exposure is outside a prescribed range of values stored in advance, the exposure maintaining means selects an upper-limit value or a lower-limit value relating to exposure which is met by the disclosure in column 5, lines 24-43. Here Shimuzu '374 explains that when the luminance level of the object is small, the reference level modulation coefficient is equal to

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1.0 until the luminance level of 1000 cd/m², and an exposure control is executed in a manner similar to the conventional manner. On the other hand, when the luminance level of the object increases to over 1000 cd/m², the modulation coefficient K also gradually increases. When the luminance level of the object reaches 25,000 cd/m², the modulation coefficient K=1.5, thereby setting the reference level signal to a value that is two times as large as the predetermined reference level.

In considering claim 3, Shimuzu '374 again discloses in Fig.1 an apparatus for performing exposure control comprising:

- a) the claimed zone selecting means which is discussed in claim 1;
- b) the claimed exposure detection means which is also discussed in claim 1;
- c) the claimed exposure control means which is discussed in claim 1;
- d) the claimed exposure maintaining means which again is also discussed in claim 1;
- e) the claimed selected-zone detection means is further disclosed by Iwasaki in Fig.9,10,12&13, col.8, line 61-col.10, line 13. Here Iwasaki teaches that a detecting processing portion 115, shown in Fig.10, detects the position of visual axis of the photographer on the basis of an output from the CCD 114, shown in

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Fig.10. The visual axis of the photographer can be discriminated according to the position of the element corresponding to the maximal value of the intensity distribution by the CCD 114. In this case, the detecting processing portion 115 can sequentially compare, as shown in Fig.12, the outputs from CCD 114 to detect the maximal value, and can supply the coordinates((Xa,Ya) shown in Fig.13) of the corresponding element to a classifying device 116, shown in Fig.9, as the position of object.

Claim 4 is rejected for the same reasons given with respect to claim 2 discussed above.

Regarding claim 5, neither Shimuzu '374 nor Iwasaki explicitly discloses the claimed selecting means for allowing a photographer to select whether maintenance of exposure is to be nullified. However, as disclosed by Iwasaki and discussed in claim 3 above , the detecting processing portion 115 detects the position of visual axis of the photographer. That is, the detecting processing portion is detecting what the photographer is seeing. It is then obvious that if the photographer considers the image he is seeing to be of poor quality, he can conveniently shift his line of sight to the spot where he can see an image which he considers to be of better quality. This way he has the

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ability to nullify or not the position of the image that the detecting processing portion 115 detects.

Claim 7 is rejected for the same reasons given with respect to claim 4 discussed above.

Claim 8 is rejected for the same reasons given with respect to claim 5 discussed above.

4. Claim 6 is rejected under 35 U.S.C. § 103 as being unpatentable over Shimuzu et al '374 in view of Iwasaki and in view of Shimuzu(US 5,400,074).

Regarding claim 6, Shimuzu '374, as modified by Iwasaki, further teaches in Fig.1, an exposing apparatus for performing exposure comprising:

- a) the claimed zone selecting means which is discussed in claim 1;
- b) the claimed exposure detecting means which is also discussed in claim 1;
- c) the claimed exposure control means which is discussed in claim 1;
- d) the claimed exposure maintaining means which again is also discussed in claim 1;

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e) the claimed memory means is again disclosed by Iwasaki in Fig.45 and column 30, lines 57-67 and column 31, lines 1-6. Here Iwasaki shows that the reading circuit 192 reads the outputs from the element indicated by the coordinates (Xa,Ya) from the CCD 107 according to the decision result indicating that the object is changed. The transferring circuit 193 transfers the above-named coordinates (Xa,Ya), and the outputs from the element obtained by the reading circuit 192 as coordinates (Xb,Yb) indicating the position of new object , and these data are stored in the coordinates holding portion 156. Thereafter, the tracking device 155 executes tracking processing of the position of the object on the basis of the above-mentioned position of the new object.

f) But neither Shimuzu '374 nor Iwasaki shows the claimed selected-zone detection means for determining whether a zoomed video signal captured by the image sensing means contains the video signal stored in the memory means, and outputting a signal that nullifies maintenance if the video signal is not contained.

However, Shimuzu(US 5,400,074) teaches in Fig.5,6&7, col.4, line 62 to col.5, line 32, a video camera device comprising a zoom lens position detecting circuit 15. This zoom lens position detecting circuit detects the amount of movement of the zoom lens in the inner focus lens assembly 1, and the detected amount is supplied to the ROM 16. The ROM 16 stores amounts of F-drop corresponding to various positions of the zoom

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lens, as shown in Fig.6. An amount of F-drop corresponding to the position of the zoom lens is supplied from ROM 16 to the control amount computing circuit 12 which calculates the open amount for the iris 2, and a gain for the AGC amplifier 4, on the basis of outputs from the loop filter 11 and the ROM 16. Thereafter, the output from the control amount computing circuit 12 is sent to the iris driving circuit 13 and the D/A converter 14. The output from the iris driving circuit 13 is then sent to the iris 2 to control the open amount thereof. Fig.7 shows a graph where the gain B of the AGC amplifier 4 is corrected to the gain curve B' by adding a gain amount 'W' corresponding to the amount of F-drop. This gain correction process shows that the zoomed video signal captured by the image sensor is nullified and then corrected if the zoomed video signal is not contained.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the camera of Shimuzu '374, as modified by Iwasaki, to include a zoomed video signal detecting means, as taught by Shimuzu '074, as an added feature to increase the versatility of the camera.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claim 9,10,12,14&15 are rejected under 35 U.S.C. § 102(e) as being anticipated by Faltermeier et al(US 5,579,156).

Regarding claim 9,10&12 Faltermeier discloses in Fig.1 a photomicroscope with a video camera and an exposure time control for a still camera comprising:

a) the claimed pointing device which is met the track ball 27c(col.4, line 53-55) which is used to shift the image area within the video image;

b) the claimed adjusting means which is met by the switching knobs 27b(col.4, lines 50-53) with which the user can choose whether the entire video image shall be used for exposure control or only an image area of alternatively 1%, 3%, or 10% of the entire image surface ;

c) the claimed memory for storing adjusting data obtained from the adjusting means which is met by the autofocus module 23(col.4, lines 33-38) where video images which are read out one after the other are stored and compared with each other, and a drive signal for the electrical focusing drive is gained from the result;

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d) the claimed control means which, when adjustment by the adjusting means has attained a prescribed state, is for storing the adjusting data prevailing at this time in the memory, which is met by the exposure control 26(col.4, lines 47-55, and col. 5, lines 11-15) which receives information on the areas of the video image taken with the video camera 14, which are to be used for exposure control. Via switching knobs 27b the user can choose whether the entire video image shall be used for exposure control or only an image area of alternately 1%, 3%, or 10% of the entire image surface. This area can be shifted within the video image by means of the track ball 27c. If the image is released via the key 27a, the exposure control 26 will deliver a control signal to the autofocus module 23 via the image processor 22, by which the autofocus is switched off during the film exposure.

Regarding claim 14, in Fig.1, and column 4, lines 47-53, Faltermeier teaches the claimed limitation that when adjustment by the adjusting means has attained a prescribed state, the control means maintains the state of adjustment prevailing at the time which is met by the disclosure that the exposure control 26 receives information on the areas of the video image taken with the video camera 14, which are to be used for exposure control, and via switching knobs 27b(the adjusting means, see claim 1), the user can choose whether the entire video image shall be used

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for control or only some portions of the image surface. In other words, the areas that the exposure control 26 receives information about from video camera 14 is the area of the video image chosen by the user through the switching knobs 27b(the adjusting means).

Regarding claim 15, in Fig.1, and column 4,lines 50-53, Faltermeier teaches the claimed selecting means for allowing the photographer to select whether storage of the adjusting data by the control means is performed or not is met by the disclosure that via switching knobs 27b(adjusting means, see claim 1), the user, which is the photographer, can choose whether the entire video image shall be used for exposure control or only an image area of alternatively 1%,3% or 10% of the entire image surface. Since the photographer chooses which image portion he wants to video, the control means stores only that image chosen by the photographer through the switching knobs 27b.

6. Claim 11 is rejected under 35 U.S.C. § 103 as being unpatentable over Faltermeier et al.

Faltermeier does not explicitly disclose the claimed limitation of a pointing device being a mouse. But he teaches, as discussed in claim 9 above, a track ball as a pointing device. It

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is well known in the art that the track ball and the mouse are both used as pointing devices.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the camera of Faltermeier by replacing the track ball of Faltermeier with a mouse as a design choice.

7. Claim 13 is rejected under 35 U.S.C. § 103 as being unpatentable over Faltermeier in view of Shimuzu et al '374.

Although Faltermeier teaches an adjusting means, as discussed in claim 1, and also discloses that to ensure that the exposure control works reliably in case of objects of poor light brightness, the frequency with which the CCD camera 14 is read out by the image processor 22 is variable due to the electronic shutter. Faltermeier, however, does not teach the claimed limitation that the adjusting means adjusts exposure of the image sensing device by adjusting f-stop, and a gain because Faltermeier does not disclose any iris for f-stop control or AGC amplifier for gain control. Shimuzu et al '374 in Fig.2 show an exposing apparatus for performing exposure control comprising an iris 2(col.4, line 35) for f-stop control, and an AGC amplifier 4(col.4, line 39-40) for gain control. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the camera of Faltermeier, as taught

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by Shimuzu '374, to include an iris for f-stop control, and an AGC amplifier for gain control, both of which can be made to be adjustable by the adjusting means in order to increase the range of exposure control available to the camera of Faltermeier.

8. Claim 16 is rejected under 35 U.S.C. § 103 as being unpatentable over Faltermeier et al in view of Arai et al(US 5,570,156) .

Regarding claim 16, Faltermeier does not disclose the claimed limitation that the screen is a monitor screen of an electronic viewfinder.

However, Arai et al disclose in Fig.3 a camera utilizing detection of visual line comprising the claimed electronic viewfinder with a monitor screen which is met by the electronic viewfinder 101(col.4, lines 58-59) which inherently has a monitor screen for viewing video images of objects.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the camera of Faltermeier, as taught by Arai et al, to include an electronic viewfinder, as an added feature, in order to monitor video images of objects, and thereby increase the exposure control range of the video camera of Faltermeier.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Onuaku whose telephone number is (703) 308-7555. The examiner can normally be reached on Monday to Thursday from 7:30 am to 5:00 pm. The examiner can also be reached on alternate Friday.

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Andrew Faile, can be reached on (703) 305-4380. The fax phone for this group is (703) 308-5399.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone is (703) 305-4700.



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SUPERVISORY PATENT EXAMINER
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